

HAAS EXPLAINS PUNCTURE WORK

Points Out Measures to Be Taken Under Ordinary and Other Conditions.

By J. J. HAAS.
Manager of the Firestone Tire and Rubber Company.

The following is the second of a series of hints written by Mr. Haas on the care of bicycle tires. Bicycle tires, which up to this year, have fallen somewhat into disuse, are again coming into their own, and this year promises to be the biggest in the history of the industry.

If a tack, pin or other puncturable object cannot be discovered in the tire, extreme care and some practice is necessary to locate the puncture. Ordinarily, punctures can be repaired with Firestone "Puncture Seal," a thick, self-healing material furnished in a collapsible container with a special attachment for insertion through puncture.

With the wheel turned so that the puncture is at the bottom and with the tire deflated, work the pointed end of container through puncture and force the "Puncture Seal" inside of tire by squeezing collapsible container. The "Puncture Seal" is forced out of two small holes in the sides of point and is therefore advisable to turn the collapsible tube round and round so as to spread the "Puncture Seal," thereby forming a patch. Remove tool slowly and hang tire in a position to allow "Puncture Seal" to flow over injury. Some time is required for the "Puncture Seal" to set and become firm—the tire should not be used before an hour after repaired in this manner.

In the event tire has been punctured through both tread and base, then treat the base or rim side of tire in the same manner as explained.

Rubber Plug Seal.
Because of the difficulty in making tires air-tight, rubber plugs and rubber bands are not recommended for the repair of ordinary punctures, except as a temporary treatment. If the puncture or cut be too large for repair with "Puncture Seal" and it is not desired to make a sectional vulcanized repair, then rubber plugs or rubber bands with a combination of "Puncture Seal" for adhesiveness can be used to advantage.

If the ferrule of valve stem should work loose or be damaged, it should be removed carefully and the rubber stem wrapped tightly with fine, flexible, soft wire. If the work is done carefully, the metal stem will be held in position and the tire will not leak.

However, should leaks develop around top of rubber stem, after wrapped with wire, or if rubber valve stem has been torn where fitted into wire, then insert a metal base valve in the following manner: Cut rubber valve flush or even with surface of tire, but do not change the size of hole in tire. Fasten threaded end of valve stem into a vise or fit it into a hole in a block of wood.

For lubricating purposes, apply some rubber cement to base of valve stem, also around hole in tire. Then pull tire over base of valve stem. Tightening of lock washer completes the operation.

Countersink Valves.
Be sure to counter sink or ream out valve hole in rim to accommodate lock washer on metal base valve. Unless this is done, tire will not fit close to rim at this point and the tendency will be to loosen.

Failure to locate a puncture and with the impression that the tire is porous, a quantity of anti-leak solution, for example, molasses, glucose and other preparations may be introduced through valve stem with the object of making the tire air tight. This treatment is all right for a tire that is old, dried out and in which the inner wall is in such condition that repairs cannot otherwise be made, but a solution should not be used in a tire which is desired to repair by vulcanization.

A solution may not be harmful to rubber, but if it soaks into the fabric, separation will usually develop between the layers and interfere with vulcanization. It is sometimes possible to wash solutions from the inside of tire but this requires considerable care and because of the doubt with regard to adhesion of inside patch and the effects of heat during vulcanization, the success of the repair can never be determined until after completion.

Tires Should Be Inflated.
The tires should be inflated so that they round out well under weight of rider. If ridden soft, the tires are more susceptible to bruises and rim cutting. Excessive wear may be expected if the foot be used on the front tire as a means of breaking momentum of the bicycle. Also avoid quick or severe use of reverse of coaster brake as this will cause rear wheel to lock and grind off tread rubber of tire. If wheels are removed from frame of bicycle, care should be exercised in placing them in the frame again. The cone adjustments should be just right and the wheels should be in balance and turn true.

Contrary to the general impression, the cracked condition of rubber known as "gun checking" is not necessarily a result of age, but is largely influenced by the conditions under which tires are held in stock—also exposure to light and sun after put into service. Tires should not be kept in display windows for any great

length of time—the rubber cover will dry out, harden and show surface checks.

Fabric Will Absorb.
Even though a solution may not contain any ingredients harmful to rubber, the fabric will absorb any solution leaking through punctures or cuts and this will invariably prevent repair by vulcanization. Solutions are often used due to failure to locate punctures and under the impression that the tire is porous. Its use is to be recommended only when a successful local repair cannot be made, either by "Puncture Seal" or by vulcanizing a section, also old tires in which the rubber inner wall has dried out and cracked.

Quality, alone, whether it pertains to tires or bicycles, will not insure the greatest efficiency, but a combination of quality and proper care will result in satisfactory service at low cost.

PATHFINDER TWELVE ON HEAVY ENDURANCE TEST

Starts from San Diego for Run to New York on High Gear.

Miss Hilda Argall, of Denver, pressed a button at 12 o'clock Pacific time July 2, which started the motor of the Pathfinder twelve-cylinder car in the Panama International Exposition grounds at San Diego, Cal., and amid the cheering of 30,000 onlookers, the car started on its record making high gear run across the entire continent to New York City.

The electrical equipment between Denver and San Diego is the same used by President Wilson in starting the exposition a year and a half ago. The motor started smoothly and the car rolled away from the exposition grounds on the first leg of its journey to San Francisco.

The Pathfinder Twelve is a regulation stock model with the exception that there are but two gears installed, high gear and reverse. This does away with any sealing of the gears or any chance to make use of low or intermediate gear in all the conditions of cross country touring, and is heralded by the Pathfinder Company as the greatest test to which a stock car was ever subjected.

TRUCK COMPANIES ANNOUNCE MERGER

Commerce Motor Car Combines with Signal and Plans Gigantic Industry Centering at Detroit.

The Commerce Motor Car Company, of Detroit, and the Signal Motor Truck Company, of Detroit, manufacturers of commercial vehicles and trucks, have merged into the Signal-Commerce Motor Truck Company, under a holding company of \$4,000,000 capitalization and backed by Detroit capital.

This announcement was made by Thomas Neal, vice president and head of the combination in association with present executives of the two companies and other men of wide experience in the commercial vehicle field. Mr. Neal was formerly president of the General Motors.

While the merger will be operated under a holding company until present contracts are filled it is the intention ultimately to combine them in one complete plant. There is ground for belief that eventually the merger will include certain motor truck accessory firms.

The executives of the new organization start with the declared intention of making Detroit as big a factor in the motor truck field as it is now in the pleasure car branch of the industry. The strength of the two companies that have merged and the scope of their operations would seem amply to warrant such an ambition. Both the commerce and the signal have been remarkably successful and prosperous and by uniting will have facilities for manufacturing and marketing trucks from the half-ton type to the five-ton, practically covering the field.

MANUFACTURE DECREASING.
Autos Making Inroads Into Wagon Industry.

The inroads of the automobile into the carriage and wagon industry during the period from 1909 to 1914 were greater in respect to pleasure vehicles than those used for business purposes. In 1909, according to statistics gathered by the United States Bureau of the Census, carriages represented 53.2 per cent and wagons 29.7 per cent of all vehicles made, but in 1914 the proportion represented by carriages had declined to 47 per cent, while that represented by wagons had increased to 48.2 per cent.

In the preparation of the 1914 census of manufacturers of carriages and wagons and of bodies, tops, cushions, hubs, felloes, spokes, wheels, and other materials used in the production of the complete vehicles, reports were received from 5,320 establishments, which manufactured 1,257,000 vehicles of all classes, valued at \$72,285,996. At the 1909 census there were reported 5,813 establishments, with an output of 1,584,571 vehicles, valued at \$94,067,000. The number of establishments thus decreased during the five-year period by 586, the number of vehicles by 327,569 and the value by \$21,781,002.

Reharden Those Jaws!
When wrench jaws start to show signs of wear the owner should have the jaws rehardened. Any blacksmith can case-harden the jaws in a few minutes at little cost.

WASHINGTON'S LATEST BRANCH HOUSE.

An exterior and interior view of the local home of the Chevrolet car on Connecticut avenue. The representation of this popular priced and popular make machine has just been taken over by the factory. Harry Mundy is in charge of the Washington branch.

TANK TRUCKS APPEAR.
Standard Oil Company Adopts Innovation.

Up-to-the minute delivery methods were brought home to Washington this week by the appearance on the streets of the new Polarine tank automobiles of the Standard Oil Company, of New Jersey. These modern delivery trucks excited a good deal of comment because of their fine appearance and utility. The running gear is blue and the body a dazzling white with gold letters. Each of them has a capacity of 600 gallons of Polarine oil.

This is the first time such a delivery service has been attempted. It was said to prove of great benefit. It was learned from the local officials of the Standard Oil Company that this service will embrace in this vicinity: Bladensburg, Hyattsville, Chevy Chase, Bethesda, Kensington, Rockville, Md., and Falls Church, Va.

ENORMOUS WOOD ORDER.
Philadelphia Speedway Requires 1,700,000 Feet.

Lumber enough to build a sidewalk from Philadelphia to Boston has been ordered by the Philadelphia Motor Speedway Association for the construction of its two-mile racing oval. The contract calls for the immediate delivery of 1,700,000 feet of long leaf southern pine.

The order was announced following a recent meeting of the association's board of officers and is believed to have set a new record for Philadelphia. It is estimated that the lumber would be sufficient to build a sidewalk of half-inch boards that would be more than 300 miles in length. The great pile of southern pine would build a roadway of one-inch planks that would be five feet wide and would reach from Philadelphia to Atlantic City.

A Frenchman has perfected a horizontal windmill with the vanes so shaped that nine-tenths of them utilize the force of the wind, no matter in what direction it is blowing.

MAXWELL PRICE CUT SURPRISES

Trade Generally Expected an Increase for the Present Auto Season.

Sometimes there is a surprise in the motor car industry that is funny only to a very few. Often the surprise is perpetrated to the chagrin of some particular person. But the Maxwell Motor Company seems to have sprung a surprise and yet to have made a really enjoyable bit of pleasure out of it for all concerned.

During the months just previous to the company's 1917 announcement, there was a continual flood of letters into the office of the Maxwell Motor Company, asking about prices for the coming season. In every letter there was this question: "How much will the price be raised?"

The dealers were so sure of the raise in price that they didn't think to consider anything else. They wanted to know what they would have to work on, how much more they would have to get from their purchasers. And also many of the wise old owls who are always to be found ready with expert opinions where motor car topics are discussed, intimated very frankly that the Maxwell Company was one of the many which would have to raise prices. Simply, no other solution, the price must go up.

Announced Reduction.
Then imagine the surprise when the Maxwell Company announced one of the greatest reductions in price since the establishment of the company. They couldn't believe it—it simply couldn't be true. Again the telegrams began to pour into the offices at Detroit. "What does this mean?" They wanted to believe the good news, but didn't want to get their systems all saturated with satisfaction until they could be sure the good news

had been verified. They were not going to take any chances on a matter so important. "I couldn't believe it!" wrote one dealer, "because I didn't think it possible for you to give any more value. But now that I know the new prices are right, that the good news is true, I begin to realize what the Maxwell policy really means. Give me all the cars for territory that you can spare!"

AUTO PRICES SOARING; NOW IS TIME TO BUY

That the purchaser of an automobile will never have another chance to get so much for his money or to buy so cheaply, is the opinion of Claude E. Miller, of Miller Bros. Auto and Supply House, who distribute the Dort car. As proof of this sweeping statement, Mr. Miller calls attention to the sturdy, efficient car turned out today as compared with their far less efficient prototypes of a few years ago. He also expresses the opinion that this present condition cannot continue for more than a short time, and he quotes some figures, which make one wonder why more manufacturers have not already raised their prices.

"The cost of motors," says Mr. Miller, "has gone up 15 per cent this spring; steel has gone up 70 per cent; tool steel has increased 300 per cent. The cost of radiators has gone up 40 per cent on account of the increase in price of brass and copper; bearing metal has increased 20 per cent. White lead has increased 100 per cent and colors from 10 per cent to 300 per cent, and some cannot be obtained at any price. Leather has gone up 25 per cent; mohair for tops, 25 per cent. All these materials enter into the building of an automobile. The manufacturer must have them or an out of business. He is paying these high prices to get them and this extra cost of manufacture must soon enter into the retail price to the consumer."

"Presuming you have the purchase of an automobile in mind, to say that it is a good tip to place your order now, is putting it mildly. You simply cannot afford to delay at all if you expect to own your car at anywhere near present market prices."

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